## ECE Undergraduate Student Affairs Office | Jacobs Hall 2700 | ece.ucsd.edu

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Updated 2/23/2017

### MAJOR REQUIREMENTS

#### Lower Division Requirements
- CHEM 6A (General Chemistry I)
- PHYS 2A (Mechanics)
- PHYS 2B (Electricity and Magnetism)
- PHYS 2C (Flu,Wav,Thrmdyn,Optics)
- PHYS 2D (Relativity & Quantum)
- MATH 20A (Calculus I)
- MATH 20B (Calculus II)
- MATH 20C (Calculus III)
- MATH 20D (Differential Equations)
- MATH 20E (Vector Calculus)
- MATH 18 (Linear Algebra)
- ECE 5 (Intro to ECE)
- ECE 15 (Engineering Computation)
- ECE 25 (Intro to Digital Design)
- ECE 30 (Intro to Computer Eng)
- ECE 35 (Intro to Analog Design)
- ECE 45 (Circuits & Systems)
- ECE 65 (Components & Circuits Lab)

#### Upper Division Requirements

**BREADTH**
- ECE 100 (Linear Electronic Systems)
- ECE 101 (Linear Systems Fundamentals)
- ECE 107 (Electromagnetism)
- ECE 109 (Eng. Probability & Stats)

**DEPTH**
- ECE 171A (Linear Control System Theory)
- ECE 174 (Intro to Linear and Nonlinear Optimization with Applications)
- ECE 175A (Elements of MI: Pattern Recognition & Machine Learning)
- ECE 171B (Linear Control System Theory), OR
  ECE 172A (Intro to Intelligent Systems: Robotics and Machine Intelligence), OR
  ECE 175B (Elements of MI: Probabilistic Reasoning & Graphical Models)
- Design Course: ECE 111, 191, or 190

#### ELECTIVES
- 6 Technical

#### 2 Professional

### 2017-2018

#### MACHINE LEARNING & CONTROLS DEPTH

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PLEASE NOTE: All courses used to satisfy major requirements must be taken for a LETTER GRADE.

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